



PATENT
HMD2000-1

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS & INTERFERENCES**

Applicants: Thomas N. Giaccherini, et al.

Examiner: Ly, Anh Vu H.

Serial No.: 09/579,324

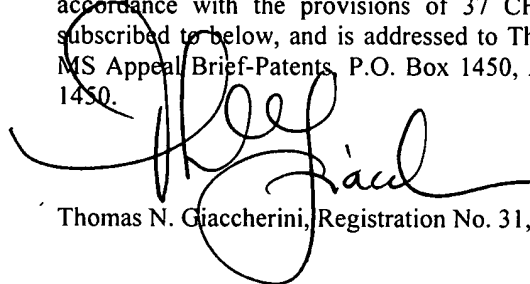
Group Art Unit: 2667

Title: **Method for Utilizing
Excess Communications Capacity**

Filed: 25 May 2000

CERTIFICATE OF MAILING UNDER 37 CFR 1.8

The undersigned hereby certifies that this document is being transmitted to the United States Patent Office by U.S.P.S. First Class Mail in accordance with the provisions of 37 CFR Section 1.8 on the date subscribed to below, and is addressed to The Commissioner for Patents, MS Appeal Brief-Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

 20 Feb 07
Thomas N. Giaccherini, Registration No. 31,075 Date

TRANSMITTAL LETTER FOR APPEAL BRIEF

The Commissioner for Patents
Mail Stop Appeal Brief-- Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

The Applicants submit three copies of an Appeal Brief, together with a Petition for a Four Month Extension of Time, in response to a Final Office Action dated 15 May 2006.

The Applicants have submitted a Credit Card Charge Authorization for the \$795 fee for the four month extension of time.



Transmittal Letter for Appeal Brief for
USSN 09/579,324
20 February 2007
Page 2

The Applicants have not submitted a Credit Card Charge Authorization for the Appeal Brief Fee. In accordance with MPEP Section 1207.04, the Applicants submit that no Appeal Brief Fee is due, since the Applicants previously paid an Appeal Brief fee on 1 March 2005. After that appeal brief fee was paid, the Patent Office reopened prosecution, and the Present Patent Application was allowed. The Patent Office allowed the Present Application without proceeding with an appeal.

The Commissioner is authorized to charge any additional amounts that are required by the Patent Office Rules to the Attorney of Record's Deposit Account No. 01-2017.

Respectfully submitted,

Thomas N. Giaccherini
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20 Feb 2007

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Transmitted to the U.S. Patent Office
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Thomas N. Giaccherini, Registration No. 31,075

20 Feb 2007

Date

APPEAL BRIEF

The Commissioner for Patents
Mail Stop Appeal Brief-- Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

I. INTRODUCTION & BACKGROUND

The Applicants have appealed from the final rejection of Independent Claims 1 and 11 and Dependent Claims 2-10 and 12-26. The final rejection was contained in the Office Action dated 15 May 2006 of Claims 1-26 are pending in the Present Application.

II. REAL PARTY IN INTEREST

The Present Application has been assigned of record to SkyVault Secure Digital Distribution, Inc., a Corporation organized in the State of Nevada, and having its principal place of business in Louisville, Colorado. The Assignee, which owns the exclusive right, title and interest in and to the Present Patent Application, is the real party in interest.

III. RELATED APPEALS AND INTERFERENCES

Neither the Applicants, the Applicants' Assignee, nor their legal representative, is aware of any related appeals or interferences which will directly affect or be directly affected by, or have a bearing in, the Board's decision in the Present Appeal.

IV. STATUS OF CLAIMS

Independent Claims 1 and 11 and Dependent Claims 2-10 and 12-26 are the only Claims pending in the Present Application. These Claims were placed under final rejection in the Official Action dated 15 May 2006. No other Claims are pending, were canceled, or have been allowed. This Appeal has been taken with respect to each of Claims 1-26.

In the Final Action, the Examiner made some minor objections to Claims 11-24 and 26. Applicants request that these objections be held in abeyance until the appeal is concluded. The objections have no bearing on any of the issues presented for review in this appeal.

V. STATUS OF AMENDMENTS

No Amendments were filed by the Applicants subsequent to the issuance of the Final Action.

VI. SUMMARY OF THE CLAIMED SUBJECT MATTER

The subject matter of the Appealed Claims, and, in particular, Independent Claims 1 and 11, is discussed at pages 6, 7 and 9 of the Specification, and is illustrated by Figures 1-3 of the Drawings. The following excerpts from the Specification summarize the nature of the claimed subject matter on appeal.

The claimed invention comprises methods and apparatus for delivering high quality digital signals to residential subscribers using the unused, excess capacity that is inherent in virtually all communication networks. (Page 6, Lines 4-6). In one preferred embodiment of the invention, satellites in low Earth orbit are employed to relay signals from a terrestrial gateway to subscribers in short bursts during the time that a satellite experiences underused capacity. (Page 6, Lines 6-9, Figure 1). A satellite SAT in Earth orbit is capable of communicating with a ground station G. (Page 6, Lines 10-11, Figure 1). The ground station is connected to a terrestrial network, such as a public switched telephone network. (Page 6, Lines 11-12, Figure 1). When a satellite experiences a period of time when all its capacity is not utilized, the satellite can request an upload of data from the ground station. (Page 6, Lines 12-14, Figure 1). The ground station then sends packets of data to the satellite in short bursts. (Page 6, Lines 14-15, Figure 2). The satellite is capable of delivering packets of data to many different types of terminals, including residences R, office building OB, cars and other vehicles C, aircraft A and boats B. (Page 6, Lines 15-17, Figure 1). The invention may be utilized to transmit signals to a wide variety of terminals, including cellular phones, personal digital

assistants, portable computers and displays, or other intelligent appliances. (Page 6, Lines 17-19).

In one embodiment of the claimed invention, digitized, heavily-encrypted packets are beamed up to the satellite from a ground station that stores an electronic, digital copy of a copyrighted first-run motion picture. (Page 7, Lines 1-3). The transfer of packets is accomplished using asynchronous transfer methods, and the packets are then routed to, and resequenced in order at their final destination. (Page 7, Lines 3-5). The encrypted packets are received by an active beam steering antenna ANT at the subscriber's premises R, and are stored in a set-top box STB which includes a large dual-partitioned array of computer hard drives. (Page 7, Lines 5-9, Figures 2 & 3). The set-top box is hard-wired to a wide screen display WSD. Packets may be received by the set-top box in very small increments over long periods of time. (Page 7, Lines 9-10). These incoming packets are stored in one of the two partitions in the set-top box. (Page 7, Lines 10-11). The second partition is used to supply on-demand unlimited-view programming while the first partition is filled incrementally. (Page 7, Lines 11-12). In one embodiment of the invention, programming is routed to the first partition over a one week period while the second partition is used for viewing. (Page 7, Lines 13-14). At the end of the one week period, the functions of the partitions are exchanged. (Page 7, Lines 14-15). The "old" programming on the second partition is replaced with the next weeks' fare, while the current programming is viewed using the first partition. (Page 7, Lines 15-17). This "rain-barrel" method of incrementally transporting data to a large storage device enables the utilization of the under-used capacity of a satellite network. (Page 7, Lines 15-17). In one embodiment of the invention, the bulk of the download of programming from the satellite to the set-top box occurs during bursts that take place at night, when normal system traffic dwindles to levels far below peak day-time usage. (Page 7, Lines 21-24).

In summary, the method defined by appealed Independent Claim 1:

conveys data over a network during a period of less than maximum usage
(Page 7, Lines 21-24),

receives the data during the period of less than maximum usage (Page 7,
Lines 21-24),

accumulates the data over an extended period of time (Page 7, Lines 9-10);
and

allows a recipient to selectively retrieve the data for on-demand use after
said extended period of time (Page 7, Lines 11-12).

In the apparatus defined by appealed Independent Claim 11, the on-demand programming selectively retrieved by the recipient is included in a plurality of digitized packets of data (Page 7, Lines 1-3), which are transmitted to a receiving means incrementally over an extended period of time by a relay means when the total communications capacity of the relay means is not fully used (Page 7, Lines 8-10, 17-19 and 21-24).

VII. GROUNDS OF REJECTION FOR REVIEW ON APPEAL

The following issues are presented for review in the Present Appeal:

1. Whether Claims 1-11 and 14-26 are unpatentable under 35 U.S.C. Section 102(b) as being anticipated by Aristedes et al (US Patent No. 5,657,072)?

2. Whether Claims 12 and 13 are unpatentable under 35 U.S.C. Section 103(a) over Aristedes (US Patent No. 5,657,072) in view of Picco et al. (U.S. Patent No. 6 029 045)?

VIII. GROUPING OF CLAIMS

The final rejection of Claims 1-26 made in the Office Action dated 15 May 2006 will be argued by reference only to Independent Claims 1 and 11.

If Independent Claim 1 is deemed to be allowable, Dependent Claims 2-10 and 25, each of which depend directly or indirectly from independent Claim 1, will be allowable at least for the same reasons as parent Independent Claim 1.

If Independent Claim 11 is deemed to be allowable, Dependent Claims 12-24 and 26, each of which depend directly or indirectly from independent Claim 1, will be allowable at least for the same reasons as parent Independent Claim 11.

IX. ARGUMENT

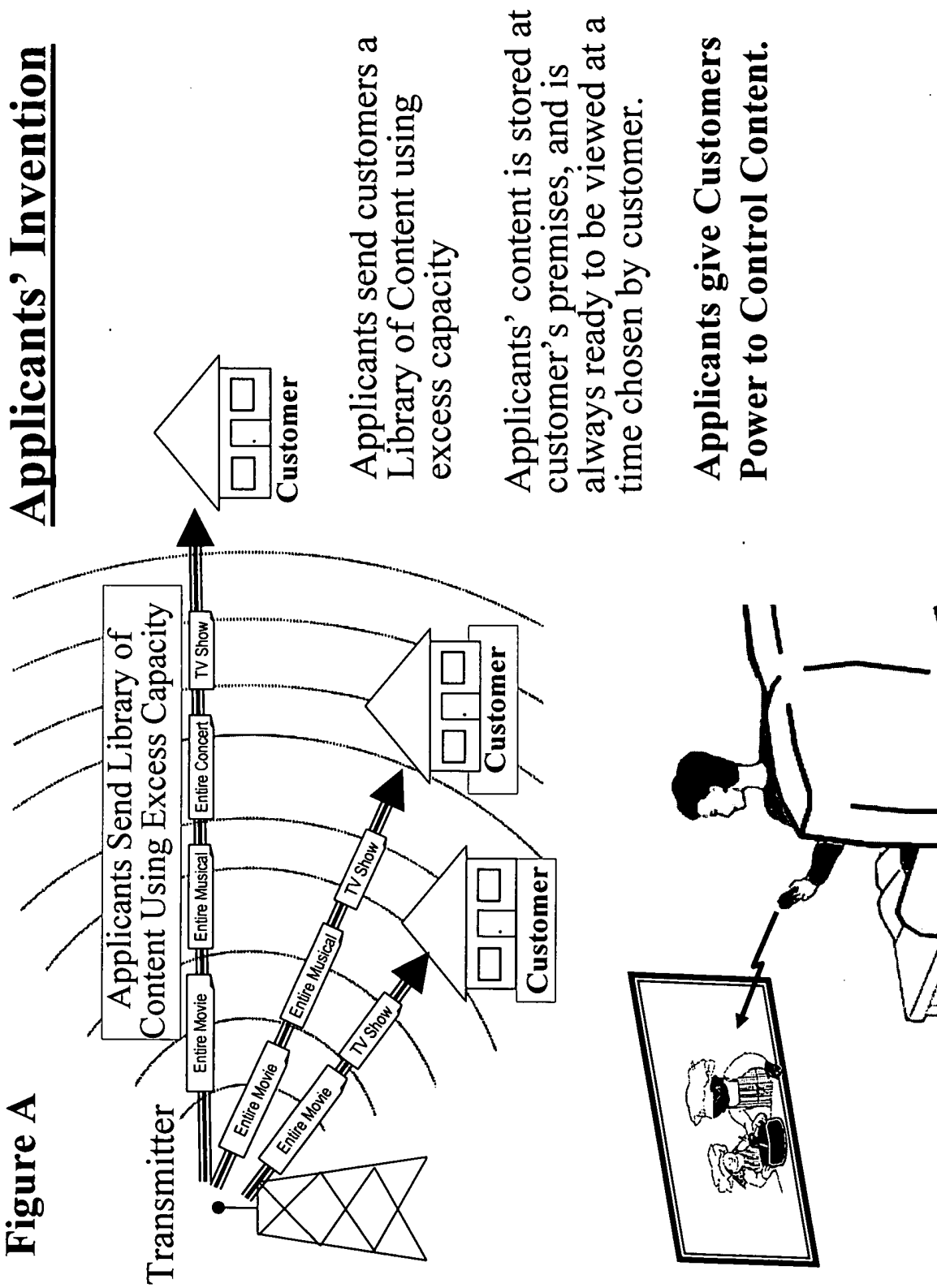
Summary

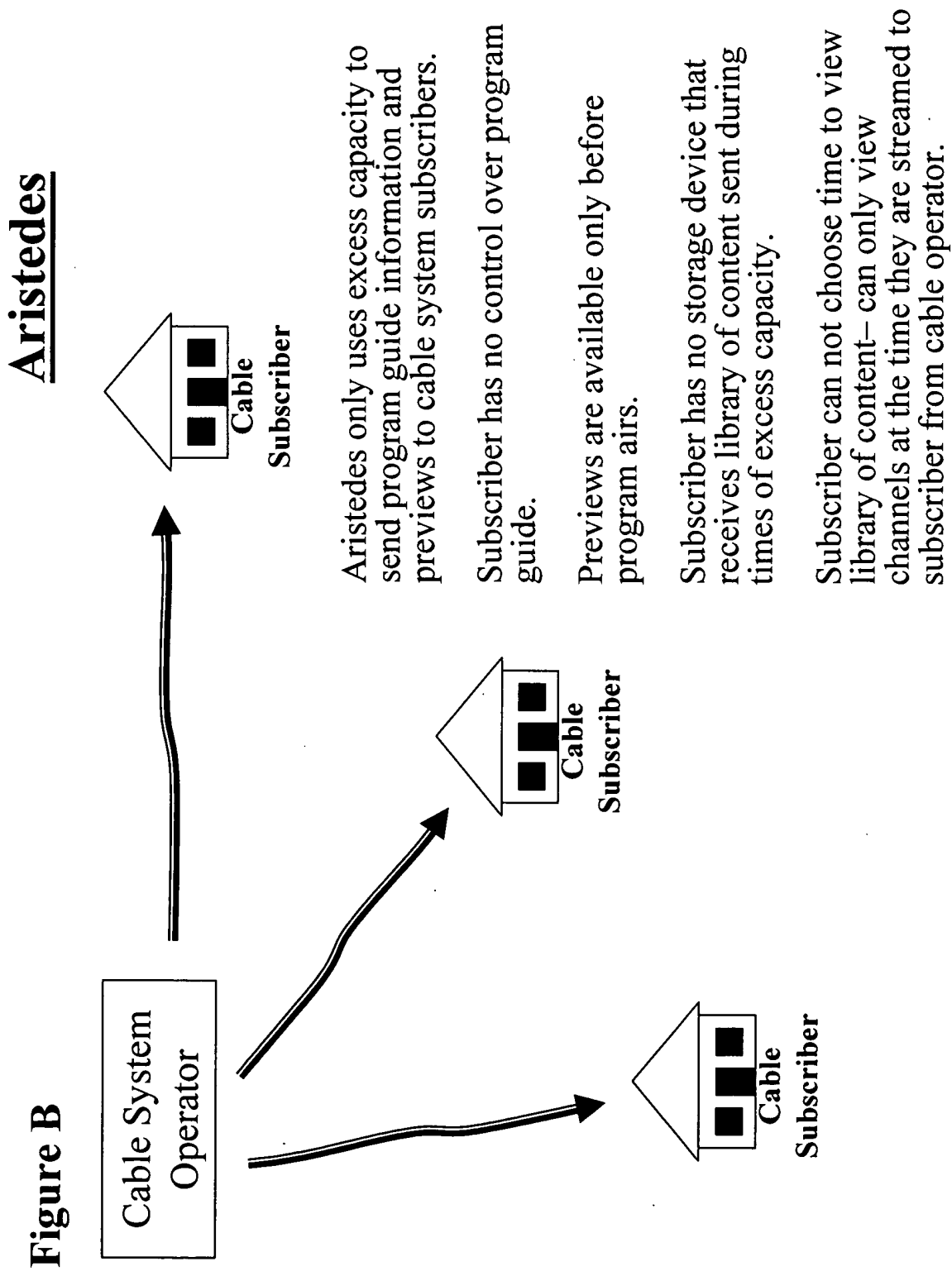
The Applicants' Invention gives the customer the power to enjoy content at a time chosen by the customer. As shown in Figure A, the Applicants send a library of content to customers using the excess capacity in a network. This library of content is stored in a large storage device that is located at the customer's premises.

Aristedes gives no control to his cable subscriber. As shown in Figure B, Aristedes sends program guide information and previews to subscribers using excess capacity, but gives no control to the subscriber either over the program guide or over the channels of television shows, which are streamed to the subscriber in real time. The previews are not available after shows have aired.

The Patent Office Rejections

The Applicants respectfully contend that the Section 102(b) rejection of Independent Claims 1 and 11 based on Aristedes is utterly unfounded and without any logical or legal basis of any kind. Applicants submit that Aristedes does not anticipate either Claim 1 or Claim 11, as a matter of law.

Figure A



Claim Rejections- Claim 1
Section 102(b)

The Examiner has rejected Claims 1-11 and 14-26 under 35 USC Section 102(b) as being anticipated by Aristides et al. (U.S. Patent No. 5 657 072).

On Page 2, Section 3, Line 3 of the Office Action dated 15 May 2006, the Examiner stated that:

“Aristedes discloses a method for on-demand use of pre-selected content by a recipient....”

The Applicants respectfully traverse the Examiner’s position. The Examiner’s statement is completely incorrect. Aristedes does not disclose a method for “on-demand” use. Aristedes’ customers receive a stream of many channels of television programs over a cable television network. The customer may only choose from among the channels provided, and **has no choice of watching full-length content at a time other than when it is provided to the recipient.** Aristedes’ customer can not watch any programs “on-demand.” Aristedes’ customer can only watch programs when the cable operator sends them to his or her television at any particular moment in time. Unlike the Applicants’ Invention, no choice or freedom is given to the recipient.

“Program grid 46 consists of multiple program tiles 52 organized in channel-based rows and time-based columns. It is located to the right of channel panel 42 and below time panel 44. Each program tile 52 has the program title and any secondary program descriptive information, such as closed caption, stereo, etc. The illustrated screen shows an example programming line-up for 8:00 p.m. to 10:00 p.m. PST, Thursday, Oct. 13, 1994. The program titles, such as “Due South” and “Matlock,” are arranged horizontally with their respective networks CBS and ABC and vertically with respect to their start times of 8:00 p.m. PST.

The viewer controls the program selection with a single focus frame 54 which is graphically overlaid on the program grid 46. Focus frame 54 can be moved up or down within a time slot, or left and right within a channel line-up, to choose a desired program. A remote control handset, a touch control panel on the set-top box, or other manipulating mechanism can be used to position the focus frame 54.”

Aristedes, Column 4, Lines 50-67.

The subscriber controls focus frame 54 to select a program which can only be viewed in the times slot designated by the cable operator, and which is not selected by the subscriber.

On Page 2, Section 3, Line 1 of the Office Action dated 15 May 2006, the Examiner rejects Applicants' Claim 1 by comparing Applicants' "plurality of different on-demand programming which may be viewed at said recipient's convenience" to Aristedes' transmission of "at least some program data records to many of the subscriber's during off-demand times prior to peak times."

The Applicants respectfully traverse the Examiner's position. The Examiner has confused Aristedes' "program data records" with the Applicants' library of content. These are not the same, and the Applicants' Claim 1 clearly distinguishes the Applicants' Invention from Aristedes on this point. Aristedes only concerns refreshing the program guide and supplying previews that are only available before a show is aired— **Aristedes does not disclose, teach or suggest sending his cable television viewers a library of content, such as a movie or television show, that they can watch at a time selected by the recipient.**

On Page 3, Section 3, Line 9 of the Office Action dated 15 May 2006, the Examiner rejects Applicants' Claim 1 by comparing Applicants' receiving and storing said data at a customers' premises with Aristedes. The Applicants respectfully contend that this comparison is incorrect. On Page 3, Line 9 of the Office Action, the Examiner refers to Aristedes' Figure 4, steps 102 and 104 and Column 8, Lines 12-13. Figure 4 of Aristedes, Step 104, is labeled with the following text:

"STORE PROGRAM RECORDS AT EPG"

This comparison is totally without merit. Aristedes only stores program records and previews which are presented to cable customers at a time chosen by the cable operator. **The customer has absolutely no control over the program records, they are merely presented to him as they are conveyed from the cable operator to subscribers.** Aristedes does not store a library of viewer-selectable content at the customers' premises, and does not enable a viewer to watch programming at his or her convenience.

On Page 3, Section 3, Line 11 of the Office Action dated 15 May 2006, the Examiner rejects Applicants' Claim 1 by comparing Applicants' selectively retrieving one or more of said plurality of different on-demand programming by said recipient for on-demand use with Aristedes. The Applicants respectfully contend that this comparison is not based in Aristedes' disclosure.

Aristedes enables the cable television viewer to access a program guide and previews, **not a plurality of different on-demand programming as recited in Applicants' Claim 1.** Aristedes' recipient does not select content to view from a library of content stored at the customers' premises. Aristedes never discloses, teaches or suggests providing "a plurality of different on-demand programming" as claimed by the Applicants. None of the channels of television programs supplied by the cable television operator are supplied using the excess capacity of the network, they are ALL STREAMED IN REAL-TIME. The Examiner may not speciously identify the supply of real-time programming by the cable operator as the transmission of a library of content that is not watched in real-time, but is, instead, gradually accumulated in a large storage device in the customer's equipment to enable the customer to watch the content at a time of his or her choosing, and as many times as he or she wishes, independent of the schedule of exhibition set by the cable operator.

On Page 3, Section 3, Line 14 of the Office Action, the Examiner merely states that “it is known that satellite can operate at different orbits and the system including a sub-orbital platform.” **This statement violates the Examiner’s obligation to cite prior art that discloses each and every element of the Applicants’ Invention when rejecting Claims based on Section 102(b).** The Examiner may not support a Section 102(b) rejection simply by saying that prior art exists. The Applicants submit that this rejection is unfounded in the Patent Law. A Section 102(b) rejection requires the Examiner to cite prior art that anticipates each and every element of a rejected Claim. The Examiner has failed to cite any prior art that cites a satellite or a sub-orbital platform used in combination with conveying a library of content using excess capacity in a network that is automatically and generally continuously stored on a recipient’s storage device, and then viewed at a time chosen by the recipient.

On Page 3, Section 3, Line 16, the Examiner rejected Dependent Claims 3-8 and 14-15 under Section 102(b) based on Aristedes. All of these Dependent Claims depend on Applicants’ Claim 1. The Applicants respectfully contend that these Dependent Claims are patentable over Aristedes, since Applicants’ Claim 1 is patentable over Aristedes.

On Page 4, Section 3, Line 1, the Examiner rejected Dependent Claims 9 and 16 under Section 102(b) based on Aristedes. These Dependent Claims depend on Applicants’ Claim 1. The Applicants respectfully contend that these Dependent Claims are patentable over Aristedes, since Applicants’ Claim 1 is patentable over Aristedes.

On Page 4, Section 3, Line 3, the Examiner rejected Dependent Claims 10 and 17 under Section 102(b) based on Aristedes. These Dependent Claims depend on Applicants' Claim 1. The Applicants respectfully contend that these Dependent Claims are patentable over Aristedes, since Applicants' Claim 1 is patentable over Aristedes.

On Page 4, Section 3, Line 5, the Examiner rejected Independent Claim 11 under Section 102(b) based on Aristedes. The Applicants respectfully traverse this rejection. The Examiner has compared the Applicants' "means for selectively retrieving and using one or more of said plurality of digitized packet of data after a generally full program has been accumulated" based on Aristedes, Column 8, Lines 36-62.

Aristedes does not teach, suggest or disclose **"means for selectively retrieving...data."** **No selection or choice over full-length content is permitted by Aristedes.** The program guide presents program records at a time chosen by the cable system operator. The subscriber has no control over the program guide. The cable operator does not provide content that may be selectively retrieved by a subscriber. Aristedes' end-user may only watch whatever is streamed to subscribers at any given time.

“Program grid 46 consists of multiple program tiles 52 organized in channel-based rows and time-based columns. It is located to the right of channel panel 42 and below time panel 44. Each program tile 52 has the program title and any secondary program descriptive information, such as closed caption, stereo, etc. The illustrated screen shows an example programming line-up for 8:00 p.m. to 10:00 p.m. PST, Thursday, Oct. 13, 1994. The program titles, such as “Due South” and “Matlock,” are arranged horizontally with their respective networks CBS and ABC and vertically with respect to their start times of 8:00 p.m. PST.

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Aristedes, Column 4, Lines 50-67.

The subscriber controls focus frame 54 to select a program which can only be viewed in the time slot designated by the cable operator, and which is not selected by the subscriber.

On Page 5, Section 3, Line 4, the Examiner rejected Dependent Claims 18 and 19 under Section 102(b) based on Aristedes. These Dependent Claims depend on Applicants' Claim 11. The Applicants respectfully contend that these Dependent Claims are patentable over Aristedes, since Applicants' Claim 11 is patentable over Aristedes.

On Page 5, Section 3, Line 6, the Examiner rejected Dependent Claims 20-24 under Section 102(b) based on Aristedes. These Dependent Claims depend on Applicants' Claim 11. The Applicants respectfully contend that these Dependent Claims are patentable over Aristedes, since Applicants' Claim 11 is patentable over Aristedes.

On Page 5, Section 3, Line 9, the Examiner rejected Dependent Claims 25 and 26 under Section 102(b) based on Aristedes. Claim 25 depends on Applicants' Claim 1, and Claim 26 depends on Applicants' Claim 11. The Applicants respectfully contend that these Dependent Claims are patentable over Aristedes, since Applicants' Claims 1 and 11 are patentable over Aristedes.

Decisions of Federal Courts Supporting Applicants' Traversing Arguments
Section 102(b)

Claims 1 and 11 have been rejected as being anticipated by Aristedes. It is axiomatic that a rejection of a claim as being anticipated by a prior art reference requires the Patent & Trademark Office to establish a strict identity of invention between a single applied prior art reference and each rejected claim. See for example, *Connel v. Sears, Roebuck & Company*, 220 USPQ 193 (Fed. Cir. 1983); *Rodewell International Corp. v. United States*, 47 USPQ 2d 1027 (Fed. Cir. 1998); *Kloster Speedsteel AB v. Crucible, Inc.*, 230 USPQ 81 (Fed. Cir. 1986), on rehearing, 231 USPQ 160 (Fed. Cir. 1986), cert. denied, 479 U.S. 1034 (1987); *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*; 1 USPQ 2d 1081 (Fed. Cir. 1986). Stated in other words, a rejection of a claim as being anticipated by a prior art reference is improper unless a single applied prior art reference discloses all features of the rejected claim, as arranged in the claim. The absence of any claimed element from the applied reference negates anticipation.

In the instant case, there is clearly no strict identity of invention between either Independent Claims 1 or 11 and the Aristedes Patent. As fully discussed herein, the method of Independent Claim 1 expressly recites the steps of conveying data including a plurality of different on-demand programs which may be viewed at the convenience of a recipient, and selectively retrieving one or more of said plurality of different on-demand programming by said recipient for on-demand use. Independent Claim 11 defines an apparatus comprising means for selectively retrieving one or more of a plurality of digitized packets of data, said plurality of digitized packets providing a plurality of different on-demand programming which may be viewed at said recipient's convenience.

Aristedes, to the contrary, provides a viewer with only a programming guide which identifies the programs and times that the programs will be broadcast by a network or cable operator. The viewer (the recipient) has no control over the content of the programming guide, which is exclusively within the control of the operator, and has no control over the time which the recipient will view the program guide, which is broadcast by the operator in real time only. More importantly, the system disclosed by Aristedes provides the recipient with no control over the time in which the recipient can view the content. Aristedes provides a system in which the recipient can view the content offered by the operator only at the time it is offered by the operator. As illustrated by Figure 2 of Aristedes, a subscriber to this system can only view "Seinfeld" between 9:00 p.m. and 9:30 p.m. on Thursday on October 13, and at no other time. Simply stated, Aristedes does not anticipate the Applicants' claimed Invention because Aristedes does not provide on-demand viewing to its subscribers. The method and apparatus defined by the Applicants' Independent Claims 1 and 11 provide on-demand viewing in which the content and time the content is viewed are selected by the subscriber, and are not controlled by the cable system operator.

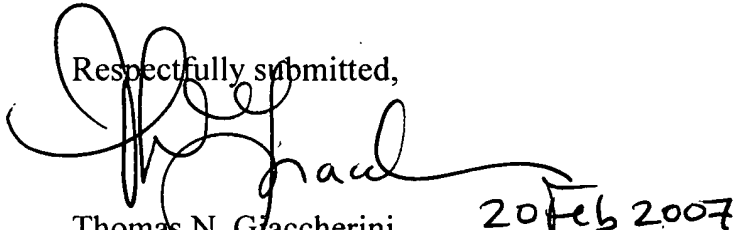
Although Claims 1 and 11 were rejected only under Section 102 and not under Section 103, any rejection of the Applicants' Claims under Section 103 would be equally without merit. Aristedes does not suggest the method and apparatus of appealed Claims 1 and 11 because, as noted above, Aristedes does not recognize a significant feature of the claimed invention, and because the overall system disclosed by Aristedes is significantly different from that disclosed and claimed by the Applicants for the reasons discussed herein.

X. CONCLUSION

The Applicants respectfully submit that Independent Claims 1 and 11 are allowable over the prior art applied in the Final Action, and request that each of the two grounds of prior art rejection raised in the Final Action be reversed.

Dependent Claims 2-10 and 12-26 depend directly or indirectly from Independent Claims 1 and 11, and thus include all features of the two Parent Independent Claims. Therefore, dependent Claims 2-10 and 12-26 will be allowable, at least for the same reasons as Parent Independent Claims 1 and 11, if the rejections of Independent Claims 1 and 11 are reversed.

Respectfully submitted,



20 Feb 2007

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Transmitted to the U.S. Patent Office
with a Rule 8 Certificate by First Class Mail
on Tuesday 20 February 2007.

APPENDIX OF APPEALED CLAIMS

1. A method for on-demand use of preselected content by a recipient, comprising the steps of:

utilizing the excess capacity of a network by conveying data over said network during a period of less than maximum usage;

5

said data including a plurality of different on-demand programming which may be viewed at said recipient's convenience;

receiving said data during said period of less than maximum usage;

accumulating said data over an extended period of time;

10

selectively retrieving said data one or more of said plurality of different on-demand programming by said recipient for on-demand use at a time after said extended period of time.

2. A method as recited in Claim 1, in which said network includes a satellite.
3. A method as recited in Claim 2, in which said satellite operates in low Earth orbit.
4. A method as recited in Claim 2, in which said satellite operates in medium Earth orbit.
5. A method as recited in Claim 2, in which said satellite operates in high Earth orbit.
6. A method as recited in Claim 2, in which said satellite operates in geosynchronous Earth orbit.
7. A method as recited in Claim 2, in which said satellite operates in low Earth orbit.

8. A method as recited in Claim 2, in which said network includes a sub-orbital platform.
9. A method as recited in Claim 2, in which said network includes a terrestrial wired network.
10. A method as recited in Claim 2, in which said network includes a terrestrial wireless network.

11. An apparatus comprising:

a gateway means for transmitting a plurality of digitized packets of data;

5 a relay means for receiving said plurality of digitized packets of data from said gateway means and for retransmitting during a time period when the total communications capacity of said relay means is not fully used;

a receiver means for collecting said plurality of digitized packets of data which are transmitted from said gateway means;

10 said receiver means including a storage means for accumulating said plurality of digitized packets of data incrementally over an extended period of time; and

means for selectively retrieving and using one or more of said plurality of digitized packets of data after a generally full program has been accumulated;

said plurality of digitized packets of data provides a plurality of different on-demand programming which may be viewed at said recipient's convenience.

12. An apparatus as claimed in Claim 11, in which said receiver means is shielded to eliminate local radio frequency transmissions that could be used to make an unauthorized copy.

13. An apparatus as claimed in Claim 11, in which said receiver means is tamper-proofed to thwart unauthorized copying.

14. An apparatus as claimed in Claim 11, in which said relay means includes a satellite.

15. An apparatus as claimed in Claim 11, in which said relay means includes a sub-orbital platform.

16. An apparatus as claimed in Claim 11, in which said relay means includes a wired terrestrial network.

17. An apparatus as claimed in Claim 11, in which said relay means includes a wireless terrestrial network.

18. An apparatus as claimed in Claim 11, in which said receiver means is located on the Earth's surface.

19. An apparatus as claimed in Claim 11, in which said receiver means is located above the Earth's surface.

20. An apparatus as claimed in Claim 11, in which said receiver means is located in a fixed terminal.

21. An apparatus as claimed in Claim 11, in which said receiver means is located in a portable terminal.

22. An apparatus as claimed in Claim 11, in which said receiver means is located in a mobile terminal.

23. An apparatus as claimed in Claim 11, in which said receiver means is located in a sub-orbital platform.

24. An apparatus as claimed in Claim 11, in which said receiver means is located in a satellite in orbit.

25. A method as recited in Claim 1, in which the step of utilizing the excess capacity of a network by conveying data over said network includes conveying said data from a satellite, said method further including the step of:

5 prior to conveying said data over said network, transmitting said data from a terrestrial station to said satellite over said network during a period of less than maximum usage of said network.

26. An apparatus as recited in Claim 11, in which said digitized packets of data are transmitted from said gateway means to said relay means during a time when the total communications capacity of said gateway means is not fully used.

EVIDENCE APPENDIX

NONE.

RELATED PROCEEDINGS APPENDIX

NONE.